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Transformation of the Air Force Medical Service- The Right Medicine?

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Transformation of the Air Force Medical Service (AFMS)- The Right Medicine?

"It must be remembered that there is nothing more difficult to plan, more doubtful of success, nor more dangerous to manage, than the creation of a new system! For the initiator has the enmity of all who would profit by the preservation of the old institutions and merely the lukewarm defenders in those who would gain by the new ones!"
Niccolo Machiavelli- "The Prince," 1513

Introduction- Transformation: What is it?

Transformation is a controversial word/concept because it means so many things to so many people. Not only is it a difficult concept to grasp but its magnitude also varies. It can be very specific, as evidenced by Deputy Secretary of Defense, Wolfowitz's description of how Special Forces "have taken 19th century horse cavalry, combined it with 50-year-old B-52 bombers and, using modern satellite communications, have produced truly 21st century capability."[1] Or more general as exemplified by Secretary of Defense Rumsfeld's desire to transform the military *culture* into one that encourages, "innovation and intelligent risk taking."[2] This paper discusses the ongoing transformation in the Air Force Medical Service (AFMS) and how these ideas may increase service jointness and be transferable to other organizations.

Common language is important when discussing a topic, so this paper begins with the definition of transformation. To a child, transformation may relate to the "transformation" of a toy from a car or animal into a fierce fighting machine in a matter of seconds. For the entrepreneur in business, it relates to "transforming" an organization from a money loser to a money winner. The Air Force defines transformation as a "fundamental change involving three principal elements and their interactions with one another: (1) advanced technologies that because of the new capability they yield, enable (2) new concepts of operation that produce order of magnitude increases in our ability to achieve desired military effects, and (3) organizational change that codifies the

challenges in the previous elements or enhances our ability to execute our national security strategy."[3] Retired Vice Admiral Cebrowski, head of the DoD Office of Force Transformation, defines it as, "those continuing processes and activities which create new sources of power and yield profound increases in military competitive advantage as a result of new, or the discovery of, fundamental shifts in the underlying rule sets."[4] Finally, Webster's dictionary defines transformation as "an act, process, or instance of transforming or being transformed." It further defines transform as, "to change completely or essentially in condition or structure; to change the outward form or appearance of; to change in character or condition." For this paper, we shall coalesce the similarities into the following definition of transformation: a positive change stemming from the use of new technologies, or using old technologies in new ways, combined with a new concept of operations and finally the cultural change that inculcates these ideas and processes into the organization.

New Technologies and Old Technologies used in New Ways

In the past, healthcare data was plentiful (old technology) but it was in separate databases that were not linked together and therefore, did not help objective decision-making. This led to a paper based, cottage industry, verses a net-centric scientific corporation. New technologies now allow us to gather data, combine it into relational databases and turn it into information so end users can make objective decisions. This thought process is similar to thought process that went into developing the Combined Air Operations Center (CAOC). It uses technology to link different services and countries air combat communication systems and has been effective in Iraq.

Three key areas of AF medicine have used this new technology and one area has used old technology in a new way. The first relates to the business and resourcing of AF medicine, the second relates to population health and the third relates to clinical practice guidelines (CPGs)/evidence-based medicine. These areas have been transformed using this technology combined with a changing concept of operations (CONOPS). The International Health Specialist (IHS) program is old technology used in a new way and is called a "World Health Interface" by the present Air Force Surgeon General (AFSG) Lieutenant General "Peach" Taylor.[5] These all have joint ramifications.

The first part of new technology leading to transformational change relates to the business and resourcing of AF medicine. In the past it was very difficult to measure workload done in or out (downtown or private sector care) of a Military Treatment Facility (MTF). This was due to data systems that did not measure workload or databases that did not relate or aggregate the data so it could be used as information. Now, all the insurance claims data from the private sector are aggregated with the military care data and can be tracked down to the individual patient, the provider who saw the patient and to the zip code and street address where the patient lives. This is very useful to local as well as corporate leadership to help objectify resourcing decisions since they can measure where healthcare takes place.

In getting to population health, data has been available on the military medically eligible population for a long time (old technology). This old data resided on separate databases and held information on demographics, ancillary studies (labs, x rays), prescriptions, and civilian billing systems. Such systems include information on treatments and diagnoses. The military health system has built a new outpatient system

of medical diagnosis, treatment and billing called the Ambulatory Data Module (ADM). The ADM adds military outpatient data on diagnosis and treatment and links it to the provider who saw the patient. Also, each patient who is enrolled to a MTF is assigned to an individual provider of care (primary care manager by name). New technology has allowed the combination of these varied databases into one relational database. The key to population health is that the healthcare provider has all the information on all of their patients (usually panels of approximately 1500 patients). This information can also be aggregated so the corporate leaders can also look at the population as a whole.

Mammography (breast cancer screening) is a good example of how this new technology works. In the past there was no direct link from the patient to an individual provider nor was there any central collection or distribution point for mammography. Mammography is recommended recurrently based on age and family history. In the past, the ways to proactively find patients who needed mammography screening were: 1) to ask specific questions when they came to the clinic for another reason, 2) send general notes out to the population at large, 3) advertise in local papers or do record reviews. These are inefficient processes that do not target the individuals who actually need screening. Now the databases, both civilian and military, are tied together centrally in the AF Population Health Division. This division then centrally manipulates data and pushes information back to the individual providers telling them which individual patients on their enrolled teams need screening mammography. This allows the teams to get the list and call those specific patients who need the test. This concept is very similar to the idea of "smart munitions" where instead of 30 bombs needed to take out one enemy target, one plane carrying 30 smart bombs can take out 30 targets. The same process is used in

other disease processes tied to demographics, ancillary studies, and/or diagnosis. The MTF or the user on the ground is the one who makes the decision on the target they want and the central databases can e-mail the answers.

Clinical Practice Guidelines (CPGs) and Evidence Based Medicine have been derived from expert analysis of medical data. This analysis leads away from a cottage industry towards network-centric scientific based standards in medicine. It has primarily been a civilian venture but the Army, as the executive agent, has been heavily involved in modifying these civilian CPGs to our military population. They also develop toolkits for the military and build specific ones such as the pre and post deployment CPG. These guidelines can be used to develop corporate benchmarks and the aggregate information can be used to build the best clinical care paths for certain disease processes. The CPGs can be thought of as a recipe, which may be varied, depending on certain tastes or situations. When varied, a provider should have an objective reason to do so. Diabetes is a good example of how these CPGs work. In general, diabetics should have certain screening studies and procedures done at specific points through their life and be treated in a way that keeps their sugars within control limits. It has been shown, by aggregate data, that if the guideline is followed, the patients have better outcomes. The population health data aids the CPG in supporting the screening and treatment plans developed for each patient and each disease process. The AF, when measured against similar health plans "is in the top 10%" for providing timely cervical cancer screening, "surpasses 66% of commercial plans" in breast cancer screening and "diabetic care program is in the top 9%."[6] These positive outcomes support the effort in population health and Clinical Practice Guidelines. All this technology is available to every service.

Concept of Operations (CONOPS)

The CONOPS for these areas began around 1996 when Lieutenant General "Chip" Roadman was the AFSG. He is a true believer in population health. He also had an incredible understanding of technology and created a learning environment in the AFSG Headquarters. This environment included book club meetings on a great variety of subjects that stretched people's minds. Business was *not* as usual. His leadership and future thought led to the initial resourcing of the information systems that supported the new technology. He retired as the systems became operational and Lieutenant General "PK" Carlton, Jr. took over with an understanding of population health, business efficiencies and a great emphasis on operational medicine. This operational emphasis included a new concept called International Health Specialists. The new AFSG, Gen Taylor, calls it the "World Health Interface" and he is now concentrating on putting the organizational structure together to support this vision. These three great thinkers have leapfrogged off each other and tied the new culture of population health into operational medicine and into the long-term resourcing strategy called the Long View.

Is the AFMS Long View transformational? It meets the criteria of transformation- the change is positive to the stakeholders (nation, taxpayer, line of the Air Force, patients, medical staff), new technologies dealing with data collection and distribution make it all possible and new organizational culture is forming through organizational restructuring, education and training and institutional process repetition. General Carlton summed up the Long View concept in a US Medicine article.

> The Long View is an enterprise-based approach that emphasizes the realignment of readiness requirements, clinical currency and best business practices, enabling the AFMS to provide quality health care and preventive services in all environments during peacetime and contingency operations. Crucial to success is

> the acceptance by each member of the enterprise that the needs of the AFMS outweigh those of the individual unit. By thinking and acting globally, we will ultimately strengthen our capabilities at the grassroots level and be able to respond effectively to the needs of our nation anywhere in the world.[7]

To understand the Long View, a historical perspective is needed. Resources in the AFMS are fixed in terms of money and manpower. Historically, the resources were allocated with AFSG direction, based on local and regional "needs". Power politics and parochialism affected the process since there was no transparency. Minimal central integration and understanding of enterprise-wide needs led to resources being out of balance with mission requirements or capabilities. Each time a new AFSG came in, there was a shift in direction that impacted the resourcing process. A bottom-up philosophy was present with each of 74 Medical Treatment Facilities (MTFs) expecting to be fully resourced based on local requirements that were transferred up through their Major Commands (MAJCOMs). This bottom-up resourcing philosophy drove each MTF to compete for a limited pool of resources and therefore drove unreasonable expectations. It was a franchised or cottage industry.

Due to this lack of transparency of the central process, headquarters decisions appeared to be made in a vacuum without rhyme or reason. The perceived lack of logic, rationality and corporate direction was a large dissatisfier in field units and lead to apathy and poorly trained strategic leaders. This was the culture of the organization and continued until the resources had been cut to the point that these parochial decisions created a crisis in recruiting, retention, morale, and system efficiency. Retention graphs from the Force Management Division showed a downward spiral that also affected the cost of medicine as services began to shift out of the MTFs. Informal surveys by AFMS consultant leaders showed that this unclear direction was a contributor to the decreased

retention. Senior leadership could not see this slippery slope due to the lack of information system evaluating efficiencies and being embroiled in day-to-day distractions. Thus, they were unable to track these trends centrally or provide prioritization based on objective criteria.

A crisis of money, morale, and inefficiencies contributed to the sense of urgency to transform the previous resource allocation process into a new fact-based resourcing decision process that the enterprise would embrace. The first step to this CONOPS was to identify the critical objective criteria upon which resourcing should be based. Why should a resource go to one location instead of another? These objective criteria were the key elements lacking in the previous process, and left the leaders blind to the consequences of their decisions. Without seeing the outcome of decisions or having "battle damage assessment," it is hard to figure out how to redirect the effort.

Readiness or Expeditionary Case Analysis

The foundation of the CONOPS lies in defining the mission of the AFMS and each member's role in that mission. If this foundation is incorrect, then the rest of the process can be objective but will be wrong due to the primary assumption or foundation being wrong. The first objective criterion was initially called the Readiness Case Analysis (RCA). Due to the expeditionary nature of the AFMS is now referred to as the Expeditionary Case Analysis (ECA) and they will be used interchangeably.

The expeditionary mission is centrally defined through Combatant Commander (CMDR) taskings based on wartime plans and the medical analysis tool (MAT) which projects casualty flow rates. It should be noted the AFMS has reengineered all readiness platforms to be very light, lean, mobile and scalable. There will be minimal to no back

up at the contingency site for the deployed AFMS personnel. Since deployed personnel will not have back up, it is critical that members have active peacetime workload or other training so they are ready for their readiness or expeditionary missions.

ECA may appear simple at first glance. What is the AFMS mission and what medical resources will it take to meet that mission? The reality is that the mission constantly changes in this constantly changing world. It is also complicated by each service (Army, Navy, AF) working separately but having a joint mission. We operate with the other services to meet mission taskings but the overall mission is neither defined jointly nor divided among the services from a central joint strategic perspective. This can lead to redundancies, missing parts and competition. There is no need for competition; there is plenty of mission to go around.

Presently the AF medical mission is consolidated at the AFSG Readiness and Manpower Offices where the Total Operational Readiness Requirement (TORR) is built. The TORR defines the medical needs required. These original missions originate from the CMDRs based on the MAT. After being defined, these capabilities (i.e. surgical team) are given to the clinical and business group who place them in a location that provides them enough peacetime workload to remain clinically current to go to war.

Currency Case Analysis (CCA)

This peacetime workload, called the Currency Case Analysis (CCA), is the second criterion and is based on civilian standards. For example, if the readiness mission states that we need 100 general surgeons to meet the expeditionary mission, the key is not only that we have 100 general surgeons in the inventory, but also that they are ready to go to war and perform the complicated surgeries expected in scenarios such as Afghanistan

and Iraq. The most efficient way to be clinically current would be to assign the surgeon to an area that has enough eligible patients to create enough surgical cases during peacetime. In the past, surgeons were sometimes assigned to locations that could not support these skills. Administrative as well as clinical personnel can use this same type of process. It is just as important that a logistician have the currency or skill to build pallets and plan deployments as the surgeon has the skills to perform the surgeries. This concept is similar to the needs of a pilot to have a range to practice in. The AF would not send a pilot to a location that they could not stay current.

Historically speaking, the AFMS had MTFs where bases were located. These MTFs took care of active duty members and their families. Retirees were seen on a space available basis. In 2000, TRICARE For Life began and millions of retirees became eligible to enroll at the MTFs (cost of approximately $10 billion a year). With this, the demographics of the patients that the MTFs could enroll had changed and the world had changed with it. For the first time in history, the military medical enrollee population was *clearly* defined and the technology existed to understand the *total* objective cost of healthcare and where it occurred. Previously, it had to be *guessed* at due the space available nature of the military health system.

Whether the patient receives healthcare within a MTF or a downtown hospital, it is still healthcare that will have to be paid for. This capability can take place in a MTF or in a civilian downtown facility with military or civilian staff. The location is not important but the capability is. Knowing the demographics of a defined population, the amount of healthcare the population consumes can now be predicted as well as the cost of healthcare. The cost is predicted by combining past civilian healthcare claims data with

the military workload system. "The U.S. military health system cares for 8.3 million people and costs $26 billion"[8] That cost can also be predicted over time with inflation and demographic changes factored in.

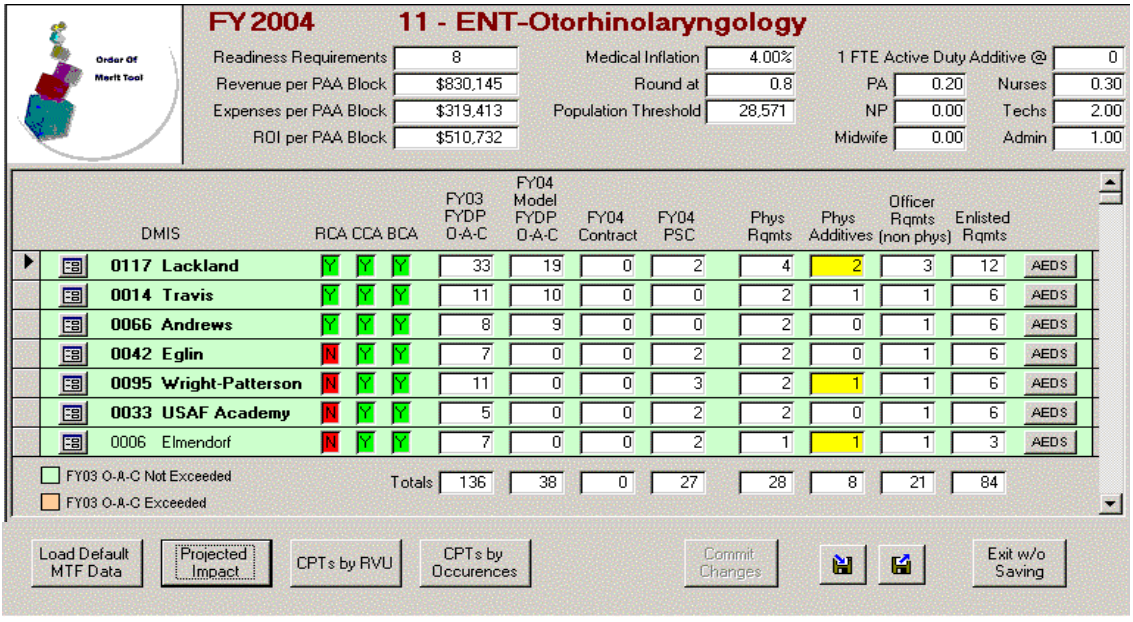
This information is broken down by zip code and associated with certain MTFs area of responsibility (AOR). Knowing where this healthcare takes place then allows logical decision making about where to place active duty manpower. Figure 1 shows how this information can be used. Wilford Hall Medical Center (Lackland) is the AF Flagship facility however, other MTFs have larger populations and potentially could deliver more healthcare. But, healthcare cost are not only related to population size, but are also related to the *demographhics* of the population. The elderly population drives more complicated care and the activity level of the active duty recruits drives up orthopedic and sports injuries. The MacDill population size also drives a lot of healthcare but due to younger demographics, it does not drive as many complicated clinical visits and therefore not as much cost. Therefore, the demographics at Lackland drive more total healthcare and the total healthcare costs surrounding Lackland rise to number one. Population and cost (actual claims and workload data) are indicators of healthcare and can also be used as surrogates for clinical currency for clinicians.

MTF	Eligible Population	Pop Rank	Total Financial Risk*	Tot $$ Rank
MACDILL	96,691	1	$ 80,696,758	9
TRAVIS	84,428	2	$ 117,914,021	5
EGLIN	82,664	3	$ 105,608,254	7
LUKE	81,567	4	$ 67,727,414	13
ANDREWS	81,300	5	$ 148,907,257	3
LACKLAND	80,552	6	$ 287,305,427	1
NELLIS	66,967	7	$ 68,121,058	12
USAFA	66,687	8	$ 183,442,955	2
SCOTT	56,242	9	$ 72,528,262	11
LANGLEY	55,168	10	$ 119,233,791	4
KEESLER	52,225	11	$ 107,066,878	6
WRIGHT-PATTERSON	51,818	12	$ 91,679,586	8
TINKER	50,299	13	$ 45,554,779	17
OFFUTT	49,170	14	$ 51,490,108	14

Figure 1. Demographics along with financial risk will sculpt our strategic opportunities and subsequent LONG VIEW Plan

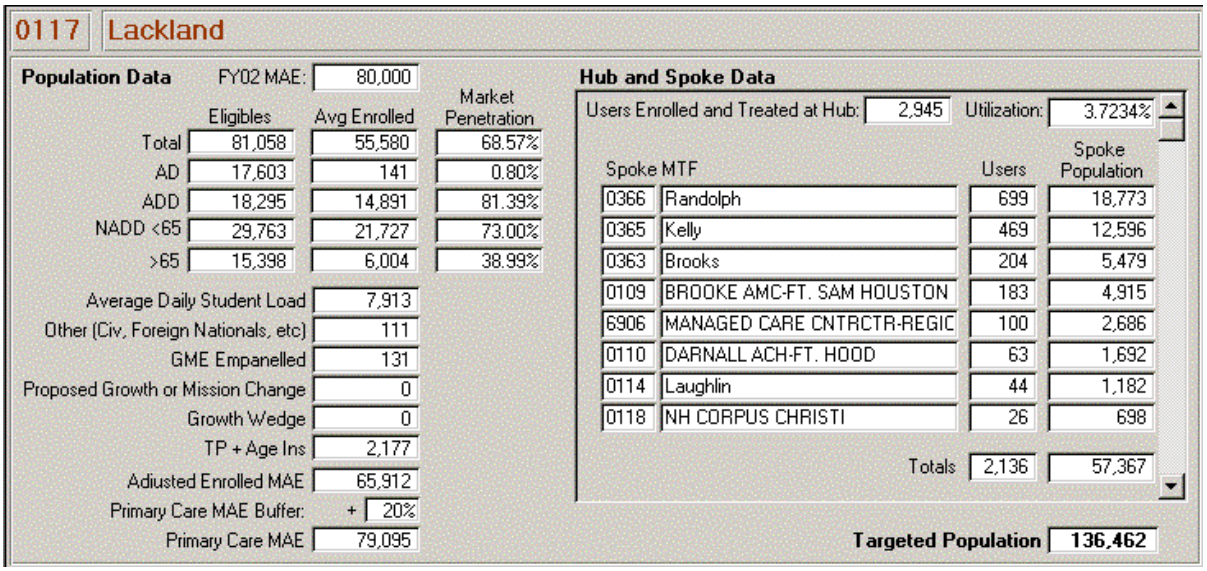
Lackland's facility is much larger then MacDill's as are many other MTFs that have lower population and financial cost data. It would make sense to realign resources to MacDill to take advantage of the clinical currency this population provides and to lower total medical cost for the corporation. Understanding the complexity of this three-dimensional chess game, a new tool, the Order of Merit Tool (OMT) was designed to help with the resourcing and decision process. This OMT incorporates all the civilian claims and MTF workload data into one database and allows anyone to see the exact cases and cost in any MTF's AOR. It can also "rack and stack" MTFs against each other in regard to the amount of healthcare each is responsible for in any clinical specialty. This tool also ties the readiness or expeditionary requirements/capabilities to this rack and stack. In figure 2, regarding otorhinolaryngology (ear, nose and throat physician), the readiness requirements (RCA) blocks go from green to red between Andrews and Eglin. That means all the readiness requirements could be accomplished at the "green" facilities. It also shows is that the business case, which will be discussed later, is still positive for AF physicians at many more MTFs than the readiness mission defines.

Figure 2- Order of Merit (OMT) "rack and stack" for Otorhinolaryngology



Diving deeper in to the OMT, figure 3 shows 1999 data related to orthopedics at Lackland. The orthopedic population includes the potential primary care enrolled (Primary Care MAE- Maximal Achievable Enrollment) of 79,095 along with the referral population of 57,367 for a total orthopedic population of 136,462. This *total* population drives the clinical currency needed for the readiness mission and therefore the resourcing.

Figure 3- Order Of Merit Tool screen capture Lackland- Orthopedics



Another question that needs to be answered is, "What population size is needed to keep an orthopedic surgeon clinically current for their readiness mission?" Using multiple sources (Medical Group Management Association, the Healthcare Advisory Board, Dartmouth and University Health System Consortium) of civilian benchmarked data and with review by the AF Consultant for Orthopedics, the average orthopedic surgeon should care for a referral population of 15,686. An additional orthopedic surgeon is required for each 10,000 active duty members due to the historical number of orthopedic injuries in this active group. Using the civilian benchmarked data, along with unique demographics as outlined by AF clinical experts, there is predictability in the

manpower resources that will be needed in each population. For the population in figure 2, it would take approximately 9 orthopedic surgeon full time equivalents (136,462/15,686=8.7) to care for the orthopedic needs of this total population. Objectively, the decision then boils down to whether this care is delivered by active duty members or the care is bought through civilian purchase. The same logic can be used for administrative roles such as group practice managers, logisticians, bioenvironmental engineers, etc.

The total costs associated with product lines have also been identified and helps the AFMS decide on the order that product lines are be studied. Figure 4 shows the data. Primary care, which included Family Practice, Pediatrics, Internal Medicine and Aerospace Medicine, was the first group to be modeled and tested. New resourcing, education and training plans have to be developed in each analyzed product line to reach full efficiency or optimization of the product line.

	Total Risk
Pharmacy	$1,696,921,308
Family Medicine	$298,123,712
Dental/Oral Surgery	$266,729,810
OB/Gyn	$181,557,551
Mental Health	$130,245,801
Lab	$126,006,877
Radiology	$119,363,674
ER	$107,361,788
Pediatrics	$105,056,615
Physical Therapy	$100,807,973
Internal Medicine	$99,712,050
Orthopedics	$94,095,565
Optometry	$86,199,676
Cardiovasc/Thoracic Surgery	$82,579,029
General Surgery	$80,463,217
Cardiology	$66,253,240
Urology	$56,367,561
Gastroenterology	$47,090,359
Neonatology	$40,629,570
Pulmonary	$40,325,065

Figure 4- AFMS Top 20 Product Lines by Cost Risk

In resourcing, retrospective manpower analysis had shown that over time the support structure had been stripped from primary care (and many other services) to pay for other AFMS manpower bills. This decrease of support personnel happened insidiously and again, was not well tracked due to a lack of information systems that tracked support staff to clinical provider ratios. As a result, clinicians were lacking support staff to do the ancillary work needed to support the patients.

Another key to building healthcare teams, as opposed to healthcare individuals, is education and training. In February 2000, initial Primary Care Optimization (PCO) education and training was conducted and 68 of 74 MTFs sent two primary care teams and leaders from their facilities to participate. The MTFs were brought in groups by MAJCOM with leaders from the MAJCOMs also participating. The training included a basic course on population health, how to work together as a team, individual roles and responsibilities and an understanding of productivity goals (also based on civilian benchmarks). The sustainment training has been built into the enlisted and officer training and traveling teams are also available that offer "on the road" training. The first meetings were tantamount to initial immunization in a vaccine series. Boosters will continue to be needed. With culture change this large, education and training is as important as the resourcing. This same type of program modeling is now taking place for five surgical product lines: orthopedics, ophthalmology, OB/GYN, general surgery and otorhinolaryngology.

Business Case Analysis (BCA)

The last criterion of the CONOPS is the Business Case Analysis (BCA). After the expeditionary readiness capability is distributed to the MTFs, a business decision

must be made on how to resource the remaining peacetime medical needs. The choices are active duty military, civilian contract or buying the care in a civilian facility downtown. The business decision would look for the greatest financial return on investment. This option is what the wraparound TRICARE contracts provide the military. Again, this could not be done in the past due to the lack of information systems that captured and shared the information needed to make these objective decisions. So as far as transformation is concerned, it is the use of old and new technology in new ways to take care of the old problem. What is the best way for the AFMS to obtain the necessary care? Do we make it (with active duty resources) or buy it (via TRICARE or other contract means)? Are we adequately matching available resources to risk, both healthcare and cost risk? Do we have the resources where they get "the most bang for the buck?" These questions can be answered through the logic of the Long View.

The AFMS mission drives requirements for a specific number of AF medics. When these medics are not deployed, logic would dictate that the active duty medics should be taking care of the eligible population. Figure 5 shows the logic of this statement and demonstrates that the most cost effective and efficient way to organize the military healthcare system is one in which the peacetime and readiness pieces of healthcare are arranged in an overlapping, interdependent relationship. The military needs the workload in the peacetime delivery system to be ready to deploy and needs to be cost effective ($5-9 billion saved) to deliver peacetime healthcare when not deployed.

The data (see figures 1-5) drives the answers to these questions and begins to get away from emotional decision-making. If we do not have to have the product line or service for the AF readiness mission, why not outsource it? Aggregated data shows that

some product lines, usually procedure based, are moneymakers and others, primary care, are money losers. The fiscal decision would be to divest of primary care and keep the procedure based product lines. The problem is that all the procedure based product lines need the referral base of primary care and need the robust facility and support to do the most complicated cases needed for their readiness expertise. A balance is struck between these two facts using data on cost, productivity and local community needs (some communities do not have services and therefore the MTF has to provide them). The new information systems allow these decisions to be made with much less emotion and much more objectivity.

Population Health and Clinical Practice Guideline (CPGs)

The population health piece of the Long View is transformational in itself as it builds health into the business strategy and supports the CPGs with information on patient panels. The population health aspect of medical care changes the culture of medicine from one of intervention to one of prevention. The mantra is "To cure disease is glory; to prevent disease is victory!" The key is not only treatment when the patient gets sick, but of one of prevention in which a primary care team (PCT) cares for a defined population of patients and actually works to prevent disease. Using the same civilian benchmarked data as was done in the previous analysis; ratios of support staff to providers were built. The CONOPS drives a team consisting of a provider, a nurse, 2 medical technicians and an administrative technician who care for an average population of 1500. The team's patient panel size will vary based on the complicated nature and utilization rate of the patients. A group practice manager, who handles the business aspect of clinic management and a health care integrator who coordinates the health

status of multiple panels and assists in the technical preventive health aspects of multiple teams also support this team. This is a "Crew Chief" mentality of ownership.

> The objective of population health activities within the AFMS is to achieve measurable gains in the health status of the enrolled population as well as the efficiency and effectiveness of the delivery system and to help build healthy communities in which to live, work and play. An integrated, collaborative approach that incorporates population health concepts into everyday operations forms the basis for implementation and sustainment of the activities required to be successful. Population health concepts address three of the AFMS's greatest challenges: 1) providing a healthy, fit, and ready force; 2) improving the health status of the enrolled population; and 3) managing an effective and efficient health delivery system.[9]

Critical success factors of population health were created to emphasize the things that must go right and to create a framework for MTFs to use to get to population health. The critical success factors are, 1) describe the demographics, needs, and health status of the enrolled population, 2) appropriately forecast and manage demand and capacity, 3) proactively deliver preventive services to the enrolled population, 4) manage medical and disease conditions, 5) continually evaluate improvement in the population's health status and delivery system's effectiveness and efficiency, and 6) energize a total community approach to population health.[10] These critical success factors could only be accomplished through the new technology of pulling data from the new aggregated databases, consolidating this information, and then redistributing this actionable information to the PCT's. This also supports the CPGs as described earlier in the case of diabetes.

World Health Interface- International Health Specialists (IHS)

The IHS Mission is "to provide a cadre of military medical professionals delivering global support to the AFMS and Unified Commands by combining cultural and linguistic proficiency with regional medical expertise in order to foster partnerships

with military, civilian, coalition, and interagency personnel and to advise Combatant Commanders on the effective use of medical assets in war and peace."[11] The vision is "to be at the forefront of international medical partnerships that enhance our ability to educate, engage and negotiate in support of the national military strategy."[12] IHS is a way old technology and resources are used in a new way to force multiply.

The IHS program was initiated in 1999 under the guidance of General Carlton. He saw numerous After Action Reports stating Humanitarian Assistance and Disaster Response missions would have gone smoother if the members had known more about the country and its language. Military medics are instruments of international policy and should be culturally aware and some should have language proficiency when deploying.

The teams, of about 8 members for each geographic area, develop military-military and military-civilian partnerships, enhance mutual understanding, promote cross-cultural communications, participate in host nation exercises, facilitate international officer exchanges, and partner in international educational opportunities. The skills required to execute the new mission include a language and cultural competency, expertise in regional medical threats and resources, knowledge of joint and interagency coordination and the ability to support coalition partnerships. An overriding goal is to determine the interoperability between the AFMS and the host nation medical system thereby enhancing our ability to deploy with the smallest amount of medical resources needed to be fully capable. It is much more effective to operate in an arena where military medical, interagency and host-nation partners have an already established working relationship.

The AFMS is taking action on its commitment to the evolving missions with the International Health Specialist Program. The program represents a new core competency for the AFMS and supports the readiness missions of humanitarian and civic assistance, disaster response and preparing for war-winning activities. The IHS program also strengths Air Force support for Unified Commanders by providing regionally focused and regionally competent medical readiness leaders.[13] The Southern Command team is the most advanced and has participated in many training and exchange programs. One training program on the organization of disaster relief and international cooperation and interoperability occurred in El Salvador. An earthquake occurred soon after and the training became the basis of the regional response. This is only one of many examples of how the process does work.

Organizational Change

John Kotter, in his book "Leading Change," emphasizes eight stages in transforming organizations. Not following or paying attention to these stages often leads to failure of organizational transformation. The stages he identifies are: 1) establishing a sense of urgency, 2) creating a guiding coalition, 3) developing a vision and strategy, 4) communicating the changed vision, 5) empowering broad-based action, 6) creating short-term wins, 7) consolidating gains and producing more change and 8) anchoring new approaches in the culture.[14] Although there was no explicit plan to follow Kotter's formula, the AFMS followed many if not all of these stages to transform the organization.

Establishing a sense of urgency

In 1999, there was a clear sense of urgency or burning platform. Centrally, there was an approximately $9 billion-dollar medical deficit combined with decreasing morale

and retention issues at the front line. These issues could not be ignored. The Military Health System (MHS) was again asking Congress for a supplemental to survive until the end of the fiscal year. The testimony and discussion was factual and similar to previous years; the MHS had been under funded for years and had no choice but to get yearly supplemental payments to survive until the next year.

Creating a Guiding Coalition

As with many new ideas in history, the AFMS Long View was brought to fruition by a small group of dedicated people motivated to solve a significant issue. In 1999, there had been a large turnover in personnel at the AF Surgeon General's (AFSG) Headquarters with many "newcomers" coming straight from the field. These individuals knew each other from previous assignments, had a vision and committed themselves to lunches, weekends and offsites to figure out a new way to objectively resource the AFMS and work on the morale and retention issues. In their hearts they felt the stars were lining up in leadership and technology for significant change. At a minimum, they felt they could build a system that would lead to transparency within the AFMS and also could objectively predict the costs for better budgeting in the future. If it were at all possible, they hoped to decrease the deficit as well. Some of these individuals were already in key positions and a recruitment campaign was designed to win over other key members in the AFSG office that had the power to effect change.

A vision and plan, without leadership backing, is not worth the paper it is written on. To get the key figure, Gen Carlton, on board the vision had to be repackaged multiple times but, in the end he not only was behind the plan, he lead it. The vision then became the AFMS's and a leadership coalition was built.

Developing a Vision and Strategy

The development of the vision and strategy has been discussed in detail in the previous sections. Key elements include having a clear vision that is easy to explain and understand. It is also essential that it is broad enough for everyone to know his or her part in the new strategy. Many participated in developing the vision and strategy so it had meaning throughout the organization. The Long View ties the readiness (RCA) to the clinical (CCA) to the business (BCA) side of medicine. Population Health, clinical optimization and the operational piece, International Health Specialist, creates a broad vision and strategy. Everyone can see that they have or will have a part in this vision.

Communicating the Changed Vision

Communicating the new vision is essential in transforming an organization. Not only did the resourcing changes need to be communicated but also the population health vision. This was done at many levels. The PCO training was a great communication tool but did not reach everyone in the organization. MAJCOMs were brought in at the PCO training and also through weekly population health teleconferences to continue the message. There are also monthly videoconferences with the AFSG and the MAJCOMs. The AFSG made a videotape explaining the LONG VIEW and it was distributed throughout the AFMS. To put boots on the ground, staff assistance visits were done with the MAJCOM in the lead and other experts along to help as needed. Annual customer service summits (all MTFs attended) were held with specific topics: the first year it was PCO, the next it concentrated on the group practice managers and healthcare integrators and the last year it emphasized the internal customer- the staff themselves.

In the resourcing world, similar events were taking place. In the resourcing conferences, the Long View basics were discussed and explained. The landmark event was the 2001 Integrated Resourcing Process (IRP). This was the first time **all** of the MAJCOMs met to build the manpower piece of the Program Objective Memorandum (POM). In the past, the MAJCOMs met separately with SG headquarters so they never knew how other MAJCOMs were resourced and therefore there was no transparency in the process. At this meeting the MAJCOMs began to understand that there were only so many resources available and when they took a resource, it came directly from some other MAJCOM and MTF. They also began to realize that they often get reassigned from one MAJCOM to another and would be taking resources from the place they would soon be assigned. This realization led to more win-wins then in the past. Everyone left with the understanding that you can never over communicate!

Empowering Broad-Based Action

The theme for PCO training was vision, synergy, and ownership. It drove to empower the front line to take care of their enrolled patients. Historically, healthcare providers took care of anyone who made it to their office and did not have stable panels. This led to frustration, because no matter how hard doctors worked, there were always more patients, and relationships with these patients were haphazard. Now with primary care manager by name, each person has a primary care physician (and team) that is responsible, along *with* the patient, for his or her health. This empowers the provider teams and the patients. Now actionable information is available to the primary care teams to act on and improve the health of their patients.

An example of this empowerment took place at MacDill. Through the strategic leadership of the local population health work group, it was decided that the whole MTF would improve their mammogram rate and held a "Mammothon". They actively found each woman who was overdue for a mammogram through the new information systems. MacDill ended up delivering over 300 mammograms in a short time and discovered new cases of breast cancer. Many of these were low grade and have a better outcome. This is one of many examples of what can happen when people feel empowered and have tools available that give them actionable information.

Creating Short-Term Wins

Short-term wins occurred in many ways. A new metric system was also developed during this time called P2R2 and is available to anyone online (https://p2r2.af.mil). P2R2 represents Gen Carlton's themes of it being a *privilege* to take care of our warriors past and present, a *pleasure* to deliver the honorable profession of healthcare, but to do this we must be *reasonable* in cost and *relevant* in what we do for the readiness component of our mission. This site monitors and measures readiness, clinical and business metrics. MTFs can track their progress and these metrics are evaluated monthly at the corporate level looking for ways to improve. There have been positive slopes on most metrics and those that are not positive are evaluated for ways to improve. This is a venue to share success and to help others who are having a hard time achieving a positive slope. The philosophy of this metric board is measure/learn/improve instead of the old culture of measure/complain/forget.

There has also been an annual video contest that the MTFs can enter and the winner is awarded money that they can use at their facility to help in patient care. The

annual themes have followed the Customer Service Summits: PCO, the group practice managers and healthcare integrators and finally the internal staff. The award and the check are given in a celebration breakfast at an annual medical conference. It is a great reward for the MTF Commander and especially their staff. There are also annual awards related to the primary care teams and many stories of small wins developed at the local level. Since each member of the healthcare team is tied to their patients and is practicing at the top of their training, the team members also have personal wins on a daily basis.

Consolidating Gains and Producing More Change

As the new resourcing process was executed, lessons were learned and positive change continued along the way. These changes not only had to be communicated to the medical community but also had to be explained and accepted by the line of the Air Force to include the Chief of Staff of the AF, Gen John Jumper. This acceptance took almost a year due to the constant learning and the challenge to get on the Chief's calendar. With the IRP, there were significant changes in whether certain services, especially internal medicine, would be delivered in certain MTFs or be delivered downtown. The readiness mission for internists is defined as intensive care due to their use on Critical Care Air Transport Teams (CCAT). Many MTFs that previously had the internal medicine product line could not support this level of clinical care. This was another culture change or possibly a culture shock. Internists would now only be placed in locations that had access to hospitals or where the services could not be obtained in the civilian setting. This is the only way they would be able to practice their intensive care skills needed for deployed missions. This product line was moved downtown, to civilian care, at many of

the small MTFs. This type of movement will continue to change as new product lines are fully analyzed.

Consolidating the process consolidates gains. After the first IRP, the MAJCOM representatives said that this was a very difficult process but they would never want to go back to the old way of doing business. The transparency in the process was greatly appreciated and helped them understand why decisions were made and could communicate the decisions back to the MTFs.

Anchoring New Approaches in the Culture

The anchor of the culture is in the leadership, the education and the training. The leadership believes in this vision and continues to support it. In the past, the AFSG/HQ was organized more based on personalities than on function and there was a lack of alignment between mission and money. There was little deliberate planning and it was hard to figure out whom to go to if you had a problem. The AFSG headquarters has been realigned by the new AFSG, General Taylor, in a manner that enhances this process of transformation. Form is following function. The AFSG Headquarters is now aligned into separate programming and execution divisions and follows a corporate process that has transparency and a vetting process for decision-making. This organization of operations, doctrine/plans/programs, force management and acquisition better align with the Planning, Programming and Budgeting System and the line of the AF. This strengthens accountability, alignment with the Pentagon and the idea of programming against capabilities and executing based on the reality of the execution year.

The other key anchor is education and training. The majority of AF medical training takes place at Sheppard AFB. They were engaged early in the process to re-write

the training plans for the enlisted and the officer training. The IRP is also a learning process that anchors the culture change and transformation. Both these are difficult processes to change and anchoring the culture change.

Conclusion

Lessons for Transformation in the Medical Services

Transformation is not an overnight process. It could be described as evolution on massive amounts of steroids. As the AFMS goes through transformation and lessons continue to be learned, the system continues to improve but the challenges do not go away. This may be a common theme in transformational change- that it is a journey, not an end. There are other efforts that can further increase effectiveness and efficiencies but are only conceptual at this time.

The first and most important action that could take place to speed up transformation would be for a joint medical services planning office be established to align the medical mission of all the services. This offices mission would be to list the capabilities; wartime, peacetime (homeland defense, humanitarian and direct MTF care), and training needed for the complete DoD medical mission and give responsibility and accountability of each capability to a service. The mission should be capabilities based, driven from joint planners that understand the wartime, peacetime and training missions of all the services. Presently, each service requirement is based on their own medical care when deployed. Each service could be given specific mission capabilities that they are responsible for so the, non-service specific, end user can call upon them when needed. There is operational jointness in the field but this is more of an afterthought then strategically or deliberately planned.

Each service already has established capabilities however, there is no place where these are objectively listed, compared and examined for redundancy and examined to see if they actually meet the overall capabilities that the end user requires. The Department of Homeland Security (DHS), through NORTHCOM, should also be involved and be thinking about what DoD capabilities may be needed when the Federal Response Plan (FRP), soon to become the National Response Plan is activated. The initial meeting on this topic was held at National Defense University in February 2003. This truly Joint Medical Mission Capabilities Document (the medical readiness mission for each service Services along with the DHS) would then begin the process of building to a *capabilities based* medical support function both for wartime and peacetime. This document would need to be vertically and horizontally integrated into the cultures.

The Joint Medical Mission Capabilities Document would also define the amount of peacetime (healthcare) currency needed for each service following the ECA, CCA, BCA methodology. This also needs to be evaluated in a joint environment to avoid overlapping or under lapping services or expectations in areas that have multiple medical facilities such as Washington, DC, San Antonio, Texas and the Tidewater area in Virginia. This planning will help members of the heathcare team have the right type of peacetime workload to always be prepared to meet their readiness or expeditionary mission. It would also maximize the efficiencies and decrease cost by allowing for as much peacetime healthcare to take place within the walls of DoD facilities. Integrating with Veteran Affairs (VA) Facilities may even add to the efficiencies. Four AF joint ventures with the VA have "saved $2.5 million and avoided over $16 million in just the last two fiscal years."[15] This process could also align with the FRP by having quick

deployable assets regionally that could possibly be used by Governors in state or federal emergencies.

Lessons for Transformation in the Non-medical Services

Non-medical services have looked for ways to decide on how much of their force should be "military" and how much could be "civilianized". The CONOPS of the Long View (ECA, CCA, and BCA) could be used to help with this difficult process. Instead of looking at their present situation and trying to decide where to "cut" military bodies, a better process may be to turn the system upside down and rebuild from a capabilities base. What capabilities in what amount are needed? Do they need to be light, lean, modular, and scalable? Which service should supply this capability? What training or currency needs to be done to meet this capability? Is it better to have this capability active, reserve, guard? Can the service be bought? What is the cost? This would also have to be done in a joint environment to be most effective. Each service brings its different culture to the table and would have to decide the value that they bring with it. This is a new world and the enemies are unlike ones that the US has fought in the past. As Thomas Friedman has stated, they are super-empowered individuals fighting as non-state actors.[16] To stay ahead of the curve, it will take new creative and what many think are risky ideas.

As Machiavelli knew in 1513, change is a difficult process. It has been clear that the service chiefs believe the military needs another Base Realignment And Closure (BRAC) but politics have often blocked this type of objective request. This medical transformation would change military services in some areas of the country and therefore is controversial to the political arm of the decision making process, as well as to the

military culture. Admiral Vern Clark made a profound statement at the National Defense University, "Culture is the collective behavior of leaders." It will take a lot of leaders, both military and civilian, to create and continue this kind of transformational change- but each journey begins with one step and the AFMS has taken the first few steps of the transformation journey.

Notes

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